Document Introduction: Requirements Package

Project:	Electronic Payments Improvement
Project No.:	DOA06-1263B
Author(s):	Dan Drislane
Organization:	Montana Dept. of Transportation (MDT)
Date:	6/26/2012
Version:	20

Document Control (This Requirements Package Only)			
Date	**Version**	**Author**	**Description**
5/4/2010	1	Dan Drislane	Original
6/8/2010	2	Dan Drislane	Additions / enhancements / updates.
6/24/2010	3	Dan Drislane	Additions / enhancements / updates.
6/26/2012	1	Dan Drislane	Original
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Introduction
This Excel workbook explains the contents to be delivered to stakeholders and the project team members of this project.

DESCRIPTION OF THE CONTENT OF THIS WORKBOOK

The content description of this workbook is first divided by the worksheet, then sections within the worksheet if applicable. Each description describes the Specification Element, the tool used to capture it (in this case, Excel), the BA Framework technique that is used to produce the Specification Element, any template utilized, Description of Use, and most importantly, the semantics of each element.

WORKSHEET: Project Info

SPECIFICIATION ELEMENT: N/A

Description:	This worksheet contains general project information.

Project Overview Section

Part Number	Name of Part	Semantic Description
1	**Description of Project**	A unique numerical identifier beginning with the mnemonic "R"
2	**Business Background and Other Helpful Information**	A brief 2-4 word caption describing the type content. You can use this column at your discretion. As an example, if you have a number of requirements that address, say, policy-related behavior, then use this column to state "Policy."
3	**Business or Functional Area**	If you are capturing requirements for more than one system, platform or business area, you can use this Part to describe the area the requirement pertains to. This is an optional column.

Supporting Documents Section

Part Number	Name of Part	Semantic Description
4	**Number**	Number of Document.
5	**Document/File Name**	Indentification of document and/or file name containing document.
6	**Author(s)**	Author(s).
7	**Version**	Latest version of the document available.
8	**Date**	Document date.
9	**Brief Description**	Brief description of document or where it can be found.

Project Contacts Section

Part Number	Name of Part	Semantic Description
10	**Number**	Number of Contact.
11	**Person**	Name of contact.
12	**Role**	Role contact is playing in this project.
13	**Phone**	Contact phone.
14	**Email**	Contact's email address.
15	**Other Role**	Any other role information or additional responsibilities.

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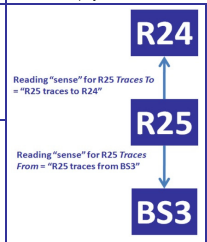
WORKSHEET: Requirements

SPECIFICIATION ELEMENT: Requirement

Tool Used:	Excel
Technique(s) Used:	1) Requirements Capture 2) Requirements Refactoring
Template Used:	In this workbook.
Description of Use:	The Requirements Specification will capture the following types of requirements: Stakeholder Requests, Functional Requirement, Operational Requirement, Guidance, Functional Flow (name only; the flow will be performed in either Word or Visio), Business Policy an Authority. If additional requirement types are required, such as Reliability or Usability requirements, we'll address those as needed.
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each requirement is documented using the following:

Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "R"
2	**Affinity**	A brief 2-4 word caption describing the type content. You can use this column at your discretion. As an example, if you have a number of requirements that address, say, policy-related behavior, then use this column to state "Policy."
3	**Business or Functional Area**	If you are capturing requirements for more than one system, platform or business area, you can use this Part to describe the area the requirement pertains to. This is an optional column.
4	**Requirement Statement**	Actual requirement text.
5	**Type**	The kind of requirement being captured. There are eleven (11) pre-defined requirement types to use and they are enforced with Excel's data validation feature: Stakeholder Request, Deployment Requirement, Entity Attribute Requirement, Functional Requirement, Operational Requirement, Performance Requirement, Reliability Requirement, Rollout Requirement, System Interface Requirement, Usability Requirement, and Guidance. These are explained in detail at the bottom of the Requirements worksheet.
6	**Priority**	Use this column if you wish to categorize your requirements by priority. There are four pre-defined priority levels to use and they are enforced with Excel's data validation feature: Low, Medium, High, Nice to Have, or N/A. (If you desire different values, you may change the data validation list.)
7	**Version Produced/Changed**	Requirements may be captured in certain iterations of gathering. This ciolumn can be used to identify which iteration—or version—the requirements was produced or changed.
8	**Phase**	If you are capturing requirements for more than one project phase, you can use this Part to categorize the phase or segment of the project. This is an optional column.
9	**State**	Requirements are often in various states or dispositions, such as "Proposed," "Approved," etc. Use this column if you wish to categorize your requirements by state of the requirement. There are seven (7) pre-defined states to use and they are enforced with Excel's data validation feature: Proposed, Validated, Approved, Incomplete, Deprecated, Deferred, and Withdrawn. These are described in detail at the bottom of the Requirements worksheet. (If you desire different values, you may change the data validation list.)
10	**Trace-To IDs**	 Up to six requirement IDs that this requirement should trace to. Use mnemonic and number, such as "R4" (Requirement #4). **Note:** There is some confusion of the words "to" and "from." The convention adopted here is that the source requirement (i.e. the actual line you are reading, or on, right now, say, R25) will "Trace To" R24. In this sense R25 is a "child" to R24.
11	**Trace-From IDs**	Up to six requirement IDs that this requirement should trace from. Use mnemonic and number, such as "R24" (Requirement #24), "A5" (Assumption #5), BS2 (Business Scenario #2), etc. **Note:** Similarly, there is some confusion of the words "to" and "from." The convention adopted here is that, say, BS3 "Traces From" the source requirement (i.e. the actual line you are reading, or on, right now, say, R25). In this sense R24 is a "child" to BS3.
12	**Notes**	Any miscellaneous notes to aid the reader in understanding the requirement.
13	**Requirement Source**	Where and/or when the Business Analyst received the requirement from. Typical examples would be: A154, interview, meeting on April 2, conference call on 3/21, etc.There are five (5) pre-defined states to use and they are enforced with Excel's data validation feature: A154, Coordinating Party Requirements Document, Stakeholder Interview, Other SME Interview, See Notes.

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WORKSHEET: User Notifications and System Messages

SPECIFICIATION ELEMENT: User Notification/System Message	
Tool Used:	Excel
Technique(s) Used:	1) Requirements Capture 2) Requirements Refactoring 3) Scenario Modeling
Template Used:	In this workbook.
Description of Use:	User Notifications are an off-shoot of Functional Requirements that mandate the application/system to be built post a message that can be read by the user. These notifications are NOT replacements for Functional Requirements but adjuncts that describe the message text and the scenario that will cause the system to display the message. The Business Analyst has some flexibility in how the User Notification worksheet in this template is used. For projects with simple Business Scenarios or no Business Scenarios (see next entry on this worksheet), the Scenario column in the User Notification worksheet can be used to describe a typical scenario that will produce the message. An example of this is as follows: Scenario = "When user selects state equal to 'Texas' post this message." [The analyst then uses the Display Message column to document the actual message.] In situations where the project mandates many well-formed Business Scenarios, the BA has the choice of not using the scenario column and instead using the Trace-To ID column to trace to the Business Scenario statement that will produce the User Notification. Since all User Notifications are a result of a Functional Requirement, in ALL CASES each User Notification statement should trace to at least one Functional Requirement. This section is also used to describe System Messages and the business information they must contain.
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each User Notification is documented using the following:

Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "N"
2	**Scenario(s)**	A brief statement of when the User Notification should be displayed. (NOTE: See description at left for guidelines on using Scenario.)
3	**Trace-To IDs**	Up to six requirement IDs that this User Notification should trace to. Use mnemonic and number, such as "R4" (Requirement #4). Note: There is some confusion of the words "to" and "from." The convention adopted here is that the source requirement (i.e. the actual line you are reading, or on, right now, say, N2) will "Trace To" R24. In this sense N2 is a "child" to R24.
4	**Message Type**	Use this column if you wish to categorize your User Notifications by type. There are five pre-defined types to use and they are enforced with Excel's data validation feature: Error, Information, Confirmation, System, or N/A. (If you desire different values, you may change the data validation list.)
5	**Message Severity**	Use this column if you wish to categorize your User Notifications by severity. There are four pre-defined severity levels to use and they are enforced with Excel's data validation feature: Low, Medium, High or N/A. (If you desire different values, you may change the data validation list.)
6	**Display Message or System Message Content**	If the Message Type is "Error," "Information," or "Confirmation," the actual text that will be displayed, such as, for example, "Claimant's policy number is invalid, please re-enter." If the User Notification display message contains variable data, such as this actual message, "Claimant's policy number of 1272518 is invalid.", use the Business Entity/Entity attribute combination encapsulated with curly braces, such as, "Claimant's policy number of {Policy.Policy Number} is invalid." In unusual cases when variable data is not stored information from a Business Entity Model, if the variable data is not in fact referenced to a Business Entity/Entity Attribute, use a meta-data descriptor encapsulated with percent signs, such as "Claimant's policy number of %Policy_Number% is invalid." Be prepared to document this metadata in a Usability Requirement and in the Glossary. If the Message Type is "System," this contains the stream of business information that must be included in a well-formed system message (i.e. XML). It's only necessary to describe the business information and the relative ordering of the information, and if the information occurs singly (one tuple) or in multples (2 or more tuples). Business Information nomenclature should map directly to business information contained in the Entity Attribute worksheet.
7	**Notes**	Any miscellaneous notes to aid the reader in understanding the requirement.

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WORKSHEET: Business Scenarios

SPECIFICIATION ELEMENT: Business Scenario

Tool Used:	Excel
Technique(s) Used:	Scenario Modeling using Sequence Diagram
Template Used:	In this workbook.
Description of Use:	Business Scenarios are a survey of the kinds of business work that an actor will accomplish with the automated system to be built. It is a brainstormed list of all possible types of business work that can be initiated buy the user and realized by the system. From there, the business analyst can decide if each business scenario would be best modeled using a use case, a usage scenario, or both.
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each scenario is documented using the following:

Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "BS"
2	**Business Scenario**	The actual name of the scenario. Use this same scenario name for the Usage Scenario (if using) and the Pathway Name (if using a Use Case). Examples of Business Scenarios are: *"Create User."* *"Add Seed Person to Seed List."* *"Delete Policy."* *"Calculate Total Premium."*
3	**Trace-To IDs**	Up to six requirement IDs that this Business Scenario should trace to. Use mnemonic and number, such as "R4" (Requirement #4).
4	**Eligible for Usage Scenario?**	If you are applying this Business Scenario to a Usage Scenario, then enter "Yes"; if you are not, then enter "No." This column is enforced with Excel's data validation feature.
5	**Eligible for Use Case?**	If you are applying this Business Scenario to a Use Case pathway, then enter "Yes"; if you are not, then enter "No." This column is enforced with Excel's data validation feature.
6	**Pathway Type**	If you specified "Yes" in the Eligible for Use Case? Column, you may choose from the following pathway types: Primary, Alternate, or Exception. This column is enforced with Excel's data validation feature.
7	**Use Case Name**	If you specified "Yes" in the Eligible for Use Case? Column, enter the Use Case name that the pathway is documented in.
8	**Notes**	Any miscellaneous notes to aid the reader in understanding the requirement.

WORKSHEET: Requirement Tactics

SPECIFICIATION ELEMENT: Requirement Tactic

Tool Used:	Excel
Technique(s) Used:	Requirements Capture and Refactoring
Template Used:	In this workbook.
Description of Use:	Describes the reasoning behind how the specification addresses a requirement which cannot be directly satisfied. Because of their nature, there are two atomic requirements in the BA Framework, Environmental Requirement and Guidance, which cannot be directly satisfied with a Solution Specification element. However, both should have some rationale present for either "mitigating" the requirement in the case of an Environmental Requirement (i.e. How will you mitigate, or make less severe the requirements?); or, in the case of Guidance, what requirmeent tactic will "support" the Guidance being offered (I.e. why are you submitting the guidance in the first place?)
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each scenario is documented using the following:

Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "RT"
2	**Requirement Statement**	The actual text of the requirement. Use relative referencing (in Excel) to refernce the text in the "Requirements" worksheet.
3	**Type**	The actual Requirement Type of the requirement. Use relative referencing (in Excel) to refernce the text in the "Requirements" worksheet.
4	**Requirement ID**	The actual Requirement ID of the requirement. Use relative referencing (in Excel) to refernce the text in the "Requirements" worksheet.

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5	**Tactic Type**	See the definition above for Requirement Tactic. There are two pre-defined types to use and they are enforced with Excel's data validation feature: Mitigating (for Environmental Requirements), and Supporting, for Guidance.
7	**Tactic Description**	Description of the tactic.

WORKSHEET: Authorities & Roles

SPECIFICIATION ELEMENT: Authorities & Roles

Tool Used:	Excel
Technique(s) Used:	Requirements Capture and Refactoring
Template Used:	In this workbook.
Description of Use:	TBD
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each scenario is documented using the following:

Part Number	Name of Part	Semantic Description
1		
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WORKSHEET: Entity Attributes

SPECIFICIATION ELEMENT: Entity Attributes

Tool Used:	Excel
Technique(s) Used:	Requirements Capture and Refactoring
Template Used:	In this workbook.
Description of Use:	TBD
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each scenario is documented using the following:

Part Number	Name of Part	Semantic Description
1		
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WORKSHEET: Judgments

SPECIFICIATION ELEMENT: Judgments

Tool Used:	Excel
Technique(s) Used:	Requirements Capture and Refactoring
Template Used:	In this workbook.
Description of Use:	TBD
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each scenario is documented using the following:

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Part Number	Name of Part	Semantic Description
1		
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WORKSHEET: Assumptions and Scope

SPECIFICIATION ELEMENT: Assumption

Tool Used:	Excel
Technique(s) Used:	1) Requirements Capture 2) Requirements Refactoring 3) Scenario Modeling
Template Used:	In this workbook.
Description of Use:	Any statement that represents a fact or opinion that is formed in the context of capturing requirements.
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each Assumption is documented using the following:

Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "A"
2	**Assumption Statement**	The actual text of the assumption being stated.
3	**Trace-To IDs**	Up to six requirement IDs that this Assumption should trace to. Use mnemonic and number, such as "R4" (Requirement #4).
4	**Assumption Source**	Where and when the Business Analyst received the source information from which to form the assumption. This is an optional column. There are five (5) pre-defined states to use and they are enforced with Excel's data validation feature: A154, Coordinating Party Requirements Document, Stakeholder Interview, Other SME Interview, See Notes.
5	**Notes**	Any miscellaneous notes to aid the reader in understanding the assumption.

SPECIFICIATION ELEMENT: Scope

Tool Used:	Excel
Technique(s) Used:	1) Requirements Capture 2) Requirements Refactoring 3) Scenario Modeling
Template Used:	In this workbook.
Description of Use:	Any statement that represents a finding of increased or decreased scope, expressed as a feature, business operation, business organization, business location, line of business, timeframe, business product, service, or any other business entity that is deemed in or out of scope for this project.
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is fairly simple to use. Each Scope statement is documented using the following:

Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "S"
2	**Scope Statement**	The actual text of the scope statement being expressed. Any statements of scope that: 1) are required to be restated from other source documents because business requirement(s) or assumption(s) directly impact it, or, 2) are newly stated and are resultant from analysis work performed by the business analyst or others.
3	**Trace-To IDs**	Up to six requirement IDs that this Scope statement should trace to. Use mnemonic and number, such as "R4" (Requirement #4).
	Scope Disposition	If you are expressing a scope statement that is destined to be included in this project, then enter "In." If you are expressing a scope statement that is destined to be excluded from this project, then enter "Out." This column is enforced with Excel's data validation feature.
4	**Scope Source**	Where and when the Business Analyst received the source information from which to form the scope expression. This is an optional column.

WORKSHEET: Glossary

SPECIFICIATION ELEMENT: Term

Tool Used:	Excel
Technique(s) Used:	All techniques in course of analysis of problem.
Template Used:	In this workbook.
Description of Use:	Any statement that defines the meaning of a term germane to the project/business domain in the context of capturing requirements and doing subsequent analysis.
Semantic Description of the Parts that make up this Specification Element:	See section below. This table is simple to use. Each Glossary Term is documented using the following:

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Part Number	Name of Part	Semantic Description
1	**ID**	A unique numerical identifier beginning with the mnemonic "G"
2	**Term**	The actual text of the term being defined.
3	**Term Type**	Most terms are either business terms or technical terms. Use this column to specify either of these two values. This column is enforced with Excel's data validation feature.
4	**Definition**	The description of the meaning of the term.
5	**Approved by Authority?**	If you are documenting a business or technical term, it is important to make sure a person or organization that are subject matter experts in the business or technical area review the term and its definition. If they approve, then enter "Yes." If they have yet to approve the term, state "Pending." This column is enforced with Excel's data validation feature.(There is no value in listing terms that have not been approved by an authority, so the value of "No" is not available.)
6	**Authority Name**	Name of the person or organization that are subject matter experts and have the authority to approve the term being defined.

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Requirement/Solution Specification Element Tag Mapping

Note: All elements in the Requirements Package and the Solution Specification Package are numbered with a mnemonic and numerical value, as in "A16," which maps to Assumption #16. This table lists the mnemonic tags that are assigned under the BA Framework. Tags are used for tracing one element to another. The list below is in alphabetical order.

No.	Requirement/ Element Tag	Maps To	Document Sourced In
1	**A**	Assumption Statement	Requirements Package
2	**AC**	User Action to Authority Mapping	Solution Specification Package
3	**AR**	Rule for Authority	Solution Specification Package
4	**AT**	Business Attribute to Authority Mapping	Solution Specification Package
5	**AU**	Authority	Solution Specification Package
6	**BS**	Business Scenario	Requirements Package
7	**EA**	Entity Attribute	Solution Specification Package
8	**G**	Glossary Term	Requirements Package
9	**J**	Judgment	Solution Specification Package
10	**N**	User Notification (messages)	Requirements Package
11	**R**	Business Requirement Statement	Requirements Package
12	**S**	Scope Statement	Requirements Package